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# ANNUAL REPORT

OF THE

DEPARTMENT OF AGRICULTURE

AND

FORESTRY

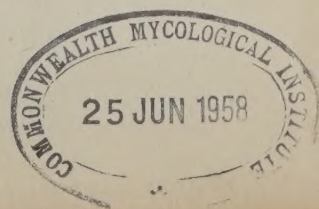
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1954 AND 1955.

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GOVERNMENT PRINTING OFFICE, GRENADA.

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# ADMINISTRATION REPORT OF THE DEPARTMENT OF AGRICULTURE AND FORESTRY 1954—1955.

## INTRODUCTION.

Several important Staff changes took place during the period under review. The post of Agricultural Superintendent became vacant in August 1954 on the appointment of Mr. St. George C. Cooper to a post in the Department of Agriculture, Trinidad. Mr. H. A. L. Francis acted from that date. Mr. J. A. N. Burra Assistant Conservator of Forests, left the colony in August to take up duties in Cyprus. Mr. C. O. Hill completed a two-year course in Forestry in Cyprus resuming duties in September 1954. The post of Veterinary Officer was created and filled for the first time in 1955 after a long-felt need for service in this direction. An important change in the Scheme for the Control of Crown Lands was the creation and appointment to the post of Crown Lands Officer thereby relieving the Forestry Division from matters dealing with Crown Lands and their development.

2. Abnormal weather conditions were experienced during the first half of the year 1955 in a prolonged severe drought claimed to be the worst of its kind within living memory. The effects of this drought, however, were restricted to the Leeward coastal areas.

3. Outstanding Agricultural events were the continued drop in the price of limes and lime products and the sustained healthy position of the Banana Industry. Concerning the former, price realised by the local producer for limes reached an all-time low figure of \$2.04 per barrel. In this connection the visit of a United Kingdom Fact Finding Mission to the citrus producing territories of the British West Indies, including Dominica is referred to at a later section of this report.

4. The value of banana exports constituted the very outstanding proportion of approximately 50% of the Colony's total principal domestic exports during both 1954 and 1955. Citrus products were next in value, at approximately 20%. It is interesting to observe that citrus products and bananas were 41% and 27% respectively of the total value of domestic exports in the year 1952.

## AGRICULTURAL POLICY.

5. The policy of the Department remains unchanged and may be summarized under the following main heads :—

- (i) The Conservation of the agricultural and forest resources ;
- (ii) The maintenance, expansion and improvement of the Colony's main export crops ;
- (iii) The organisation and improvement of peasant agriculture ;
- (iv) The re-organisation and improvement of the livestock industry ;
- (v) Greater efficiency in production, processing and distribution of agricultural products ;
- (vi) Improvement in the form of land tenure.

6. The implementation of these main heads of policy progresses as circumstances, funds and the availability of trained staff permit.

## PART I.

### AGRICULTURE IN THE COLONY.

7. *Weather Conditions* : In 1954, 105.53 inches were recorded as the average rainfall from 14 stations. At the Botanic Gardens, the total recorded was 86.11 inches which was 3.64 inches less than the preceeding year. Distribution was even with a maximum fall of 18.08 inches in September. In 1955, however, the total at the Botanic Gardens was 54.16 inches which was 36.26 below the last twenty-five year average. This severe drought which did not terminate until June—July appeared to have been felt throughout the entire Eastern Caribbean. The average rainfall recorded from 13 recording stations was 82.05 inches in 1955.

8. Hurricane warning ("Janet") was issued from official Weather Reporting Services in September 1955, but the hurricane did not strike the island.

9. The mean absolute maximum and minimum temperature for the period were 88° and 69° respectively from 1954 and 97° and 82° for 1955.

10. Mean barometric pressure was 29.97° and 29.96° for the respective years. The lowest reading was 29.78° on 9th October.

11. The readings for mean relative humidity were 65° and 65° for 1954 and 1955 respectively.

## MAJOR INDUSTRIES.

12. In 1955 the value of exports totalled \$4,540,958 compared with \$4,300,300 in 1954. Principal exports were bananas, limes and lime products, other citrus, copra and cocoa. A table of exports appears as Appendix III to this Report.



13. *Lime Industry* : On the economic side there was a further decline in the price of limes which continued during 1954 and showed but little improvement in the following year. Producers were faced with uneconomic returns and the future of the industry appeared to be seriously threatened with disaster. Negotiations were commenced by the local Lime Association for a joint representation of the situation through the Regional Economic Committee with other citrus producer Associations in the British Caribbean to Her Majesty's Government. A Fact Finding Mission was accordingly appointed by Her Majesty's Government to visit the territories concerned with the view to examining the organization, costs and the future plans and prospects of the West Indies Citrus Industry. The Mission visited Dominica in December 1954 and after a thorough examination of all aspects of the Industry drew up for future consideration certain proposals for a general improvement of the industry based upon a long-term policy which would provide guaranteed minimum prices, subject to upward or downward variation in accordance with price levels prevailing in the British Caribbean, and to other relevant consideration.

14. Total production of limes during the period is shown in the following totals based upon exports :—

| Products.                 | 1954.         | 1955.         |
|---------------------------|---------------|---------------|
| Settled Lime Juice ..     | 290,726 gals. | 563,207 gals. |
| Lime Juice Top Pulp ..    | 40,181 „      | 82,069 „      |
| Pomace of dried Lime Skin | 113 tons.     | 134 tons.     |
| Distilled Lime oil ..     | 34,906 lbs.   | 40,150 lbs.   |

15. *Other Citrus* : Shipping opportunities available on banana boats to the United Kingdom for grapefruit, oranges and fresh fruit continued to be available. 31,500 and 19,900 crates of grapefruit were shipped to the United Kingdom in 1954 and 1955 respectively. Comparable figures for oranges were 4,600 and 10,000 crates. There were the usual small shipments of these products to Bermuda and other British Caribbean territories. The larger proportion of total grapefruit and orange production still remains unmarketed.

16. *Bananas* : The banana industry maintained a satisfactory level and was the principal item of export in value during the period. Although production remained well over the million-stem mark it levelled out during 1955. This was largely attributed to the severe drought. Keen interest in the crop, however, is still maintained and this was reflected in the planting of an estimated 1,000 new acres in bananas during 1954 and 1955. The following table shows the position of the industry over the past five years :—

| Year.      | Stems Exported. | Value (\$) |
|------------|-----------------|------------|
| 1951 .. .. | 576,770         | 720,527    |
| 1952 .. .. | 856,856         | 1,073,426  |
| 1953 .. .. | 1,135,746       | 1,792,858  |
| 1954 .. .. | 1,352,010       | 2,308,320  |
| 1955 .. .. | 1,374,260       | 2,484,931  |

Present road development programmes are having the effect of causing still further areas to be planted in bananas.

17. *Cocoa* : The cocoa industry showed a decline in production compared with the proceeding period. In 1955, however, the position was slightly improved. Shipments during 1954 and 1955 totalled 144 and 188 tons respectively. Those areas which were earlier planted with clonal cocoa are now coming into bearing and are proving to be superior in yield to the ordinary seedling cocoa. The use of bananas as a shade crop for cocoa affords splendid opportunity for increasing cocoa acreages simultaneously with the rapid planting of bananas. Five estates have now erected their own propagators to produce rooted cuttings. These units are all designed for an annual production of approximately 10,000 cuttings. This step reflects the keen interest shown in the crop.

18. *Coconuts* : Exports of copra showed an increase over previous years. Shipments were 919 tons and 1,021 tons in 1954 and 1955 respectively. The price of copra remained at a satisfactory level. The planting of new areas to coconuts continues. All efforts are being taken to ensure careful selection of planting materials.

19. *Coffee* : The emphasis placed upon other cash crops has detracted somewhat from attempts to rebuild the coffee industry. Demands for coffee seedlings from the Department's nurseries were negligible or non-existent. Local susceptibility of the crop to the attack of the Coffee "Leaf-Miner" is a further deterrent. The control of this pest is an item under investigation in a Colonial Development and Welfare Research Scheme for the biological control of local pests which are known to attack the major crops.

20. *Vanillas* : Vanilla exports showed an appreciable decline in volume compared with 1953 when 31,000 lbs. of cured beans were shipped. 18,000 and 9,924 lbs were shipped in 1954 and 1955 respectively. The chief market is the United States of America. Local production is largely determined by changes in price on a market which is usually liable to sudden and sharp price fluctuations.

#### FOOD PRODUCTION.

21. With the exception of livestock products, food production was maintained at a fairly satisfactory level although the prices paid by the consumer on the local retail market were on the increase. The exchanges of commodities in an inter-island market comprised chiefly shipments of grapefruit



and oranges to Barbados and the Leeward Islands and the occasional import of tomatoes from Montserrat. This was handled chiefly by the husksters trade. The very limited local supply of meat was supplemented by imports of live cattle for slaughter from St. Vincent.

#### AGRICULTURAL CREDIT.

22. The Credit Scheme which commenced in 1952 continued to function and had its desirable effect upon production. Loans issued under the Scheme have been utilized essentially for Banana production. By December of 1955, approximately 75% of the total sum available under the Scheme was taken up in loans. Collections of loans is undertaken through the Banana Association in a system of proportional deduction from cash sales of stems presented for shipment. A large proportion of loans to peasants took the form of fertilizer.

#### PESTS AND DISEASES.

23. Pests and diseases had no disastrous effect upon the major crops. Under the Colonial Development and Welfare Research Scheme referred to at paragraph 19 above under the head "Coffee", the services of an Entomologist of the Commonwealth Institute of Biological Control were made available for investigation of appropriate measures for the control of the following crop pests :—

- (i) The Banana Borer—"Cosmopolites sordidus";
- (ii) The Fruit-piercing Moth of Citrus—"Gonodontia incurva";
- (iii) The Sugar Cane borer "Diatraea saccharalis";
- (iv) The Coffee Leaf-Miner "Leucoptera coffeella";
- (v) The Citrus Weevil "Diaprepes Spp".

The predators "Plaesius javanus" and "Leionata quadridentata" were introduced for the control of banana borer but are required in larger quantities to enable a more rapid build-up in their population. The introduction of "Lixophaga" and of "Metagonistylus" have proved successful for the sugar cane borer. The Coffee Leaf Miner, and the Fruit-Piercing Moth are in need of further investigation.

24. The use of the rodenticide "Warfarin" has become popular and has had good results both in cultivations, particularly cocoa and coconuts, and in households.

25. The Leaf Spot Control Organization under the direction of a Board of Control was continually engaged in controlling the disease in bananas. The rapid increase in banana acreage, however, especially during 1955, tended to make effective control and the execution of regular spraying cycle more difficult for a limited number of Field Staff. The Executive Officer for Leaf Spot Control visited Guadeloupe in October 1955, on a tour arranged by the Caribbean Commission for the purpose of studying the control of Leaf Spot disease of bananas by Low Volume Spraying technique. Towards the end of 1955, materials and equipment were secured and spraying demonstrations of the new Low Volume method of control were locally instituted. Proposals were submitted to Government to enable the control of the Leaf Spot Control Organization to become the direct responsibility of the Banana Board of Control. The Administrative Officer for Leaf Spot work was transferred from Roseau to Goodwill.

#### COLONIAL DEVELOPMENT AND WELFARE FIVE-YEAR PLAN.

26. Draft proposals for Agricultural Development under the present Colonial Development and Welfare five-year period were prepared and submitted. The schemes involved were as follows :—

Cocoa Industry Improvement, Agricultural Stations, Central Livestock Farm, Crown Lands Control, Forest Reservation and Control and Agricultural Staff. At the time of writing, most of the schemes have obtained the approval of the Secretary of State.

### PART II.

#### WORK OF THE DEPARTMENT.

##### ADMINISTRATION.

27. Full progress in the programme of work was handicapped by the absence of certain senior officers. The post of Assistant Superintendent of Agriculture was unoccupied from August 1954 to the end of 1955, as the substantive holder of this post acted as Agricultural Superintendent during this period.

28. *Extension Services* : The extension and Advisory Services of the Department directed their duties chiefly towards the following aspects :—

- (i) The Supervision and management of five Agricultural Stations ;
- (ii) The propagation and distribution of economic plants ;
- (iii) The agricultural inspection of Crown Lands prior to sales ;
- (iv) Advance inspection of lands for the planting of citrus and cocoa ;
- (v) The application of Soil Conservation Methods ;
- (vi) The inspection of holdings for the purpose of recommendation for agricultural loans ;
- (vii) Assistance in the control of banana Leaf Spot disease.

29. *Soil Conservation* : The rough and steep topography of the land necessitates the careful application of anti-erosion methods coupled with proper cultural methods. Fortunately, however, a large percentage of the cultivated area is occupied by orchard crops which do not call for that same



degree of soil exposure occasioned by the growth of short-term arable crops. With the increase of banana cultivations, however, especially on isolated steep slopes, the position calls for careful attention with special reference to contour drainage or barriers to avoid the disastrous effects of erosion to which this category of land is very liable.

30. Under the Scheme for the Control of Crown Lands a Soil Conservation Plan was again undertaken whereby small incentives in the form of cash payment were made available to small farmers to assist in defraying part of the cost of establishing anti-erosion works on their holdings.

Farmers are becoming increasingly conscious of the need for Soil Conservation, and the Field Staff provides all possible technical advice to tackle the problem in the field. It is felt, however, that many farmers especially those in the smaller category, find the initial cost of anti-erosion work prohibitive. The provision of subsidies in this direction could be beneficial.

31. *Botanic Gardens* : The ornamental section was maintained in fair condition. The drought of 1955 caused several patches of the lawn to become bare but this condition corrected itself with the rains. The following plant introductions were made. :—

- (1) Pepe Coca ;
- (2) P. K. 1000 ;
- (3) Hibiscus colinse ;
- (4) Ceratonia siliqua ;
- (5) Theopesia populnia ;
- (6) Stenolobum stans ;
- (7) Erythrina sp. ;
- (8) Lagerstroemia tomentosa ;
- (9) Sakeisia africana ;
- (10) Hibiscus elatius.

In the economic section, citrus, cocoa, coffee, avocado pears, and black pepper were propagated for distribution as well as a limited number of ornamentals. The operation of a market garden was again undertaken. The produce found a ready market in Roseau.

32. *Plant Propagation and Distribution* : The uncertain position of a citrus market was reflected in the demand for citrus plants from the Department's nurseries where large numbers of budded plants remained on hand. The position with cocoa was the reverse : demand was far greater than supply. The following plants were distributed from propagating stations :—

|                         |       | 1954. | 1955.  |
|-------------------------|-------|-------|--------|
| West Indian Limes       | .. .. | 2,031 | 3,722  |
| Oranges                 | .. .. | 695   | 807    |
| Grapefruit              | .. .. | 533   | 2,204  |
| Other citrus            | .. .. | —     | —      |
| Coffee                  | .. .. | 2,164 | —      |
| Avocado pears           | .. .. | 164   | 151    |
| Coconuts                | .. .. | 442   | 46     |
| Vegetable seedlings     | .. .. | 523   | 338    |
| Vegetable seeds : pkts. | .. .. | 9,446 | 326    |
| Yams (lbs)              | .. .. | 3,206 | —      |
| Sweet potatoes (lbs.)   | .. .. | 75    | 23,000 |
| Fodder grasses          | .. .. | 2,100 | —      |
| Nutmegs                 | .. .. | —     | —      |
| Mangoes                 | .. .. | —     | —      |
| Black pepper            | .. .. | 122   | —      |

33. *Agricultural Stations* : Five District Agricultural Stations were maintained with the following functions :—

- (i) Plant propagation and distribution ;
- (ii) Demonstration of improved cultural methods ;
- (iii) Maintenance of "stud" animals for public service ;
- (iv) Soil Conservation ;
- (v) Investigational work.

The revenue derived from the sale of produce on these Stations was \$6.168 in 1954 and \$2,687.68 in 1955.

34. Total stud services of bulls, boars, rams and bucks were 134 in 1954 and 135 in 1955.

35. Adequate measures were taken for the demonstration of proper methods of cultivation and husbandry with special regards to crop-rotation and the production of food and cash crops in a proper balance. Field days were arranged at certain stations as opportunity permitted.

36. Investigational work had unfortunately to be restricted due to the lack of staff to undertake this type of work. Simple manurial trials, however, were concluded with short-term crops including maize, cassava, and sweet potatoes at one of the major stations. The indications were that phosphate in all cases gave increases not only in the rate of growth and general vigour of plants, but also in improved yields.



37. *Central Livestock Farm* : During 1954, a supplementary Colonial Development and Welfare Grant was secured to enable operations to continue up to August 1955, pending further continuation of the Scheme under the next 5-year Development period. Although the establishment of the Farm was essentially a pioneer project rendered the more so by the lack of local experience in the management of livestock, the performance of the nucleus dairy herd can be claimed to have been satisfactory. The aim towards self-sufficiency of the Farm as an entire unit had necessarily to be revised in the light of changing conditions including the cost of labour, materials and of imported feeding stuffs.

38. The overall performance of animals was satisfactory, and indeed was well above local averages. The following records represent activities at the Farm during the period :—

|                 |    |    |      | Births.                 | Stud Services. | Sales.       |
|-----------------|----|----|------|-------------------------|----------------|--------------|
|                 |    |    |      | —                       | —              | —            |
| Cattle          | .. | .. | 1954 | 11                      | 130            | 1            |
| "               | .. | .. | 1955 | 4                       | 79             | 10           |
| Pigs            | .. | .. | 1954 | 54                      | 15             | 87           |
| "               | .. | .. | 1955 | 66                      | 12             | 46           |
| Sheep and Goats | .. | .. | 1954 | 16                      | 20             | 26           |
| "               | "  | .. | 1955 | 15                      | 9              | 5            |
| Poultry         | .. | .. | 1954 | 295 (incubated)         | —              | 185          |
| "               | .. | .. | 1955 | 37 (incubated)          | —              | 93           |
| Milk            | .. | .. | 1954 | 54,479 lb. (production) | —              | 37,375.5 lb. |
| Milk            | .. | .. | 1955 | 47,314 lb. (production) | —              | 35,010.5 lb. |
| Eggs            | .. | .. | 1954 | 14,906 (collected)      | —              | 14,082       |
| Eggs            | .. | .. | 1955 | 15,469 (collected)      | —              | 14,524       |

Total revenue derived from the Farm was \$6,678.16 in 1954, and \$6,888.00 in 1955 from the following sources :—

|                 | 1954               | 1955            |
|-----------------|--------------------|-----------------|
| Sale of Animals | .. \$ 1,914.09     | \$ 2,239.46     |
| Eggs            | .. .. 1,126.00     | 1,011.21        |
| Stud Services   | .. .. 112.80       | 73.44           |
| Milk            | .. .. 3,342.43     | 3,512.04        |
| Miscellaneous   | .. .. 182.84       | 52.59           |
|                 | <u>\$ 6,678.16</u> | <u>6,888.74</u> |

39. The general health of animals with perhaps the exception of pigs was maintained at a satisfactory level. There were no outbreaks of contagious diseases. One heifer was killed by lightning.

40. At the end of 1955 the inventory of animals at the Farm stood as follows :—

|                  |    |    |    |           |
|------------------|----|----|----|-----------|
| Bulls            | .. | .. | .. | 3         |
| Cows             | .. | .. | .. | 13        |
| Calves           | .. | .. | .. | 12        |
| Yearling heifers | .. | .. | .. | 5         |
| Yearling bulls   | .. | .. | .. | 2         |
| Pigs (overall)   | .. | .. | .. | 24        |
| Sheep (overall)  | .. | .. | .. | 30        |
| Goats            | .. | .. | .. | 2 (studs) |
| Poultry          | .. | .. | .. | 81        |

41. Stud animals produced at the Farm were distributed for use at District Agricultural Stations. The improvement of pasturage was a matter for special attention. Grazing grasses were introduced for trial, including "Antigua Hay" and "Pangola".

42. Dr. D. R. Melrose, M.R.C.V.S., of the Reading Cattle Breeding Centre visited the Colony in 1954 to advise on the possibilities of artificial insemination and other aspects pertaining to livestock. During his visit Dr. Melrose paid special attention to the Farm and gave useful advice on the general breeding policy and on the care and management of animals.

43. *Livestock* : Generally speaking, much remains to be done in this direction. The technical advice and direction offered by government is in great need of practical adoption on the part of all landowners. By far the larger number of livestock is now owned by the peasantry. This should be no cause for alarm provided the industry as such can be properly organized to allow for adequate returns to the producer. The large land-owner, however, has yet to make his proportionate contribution towards a satisfactory livestock industry. Unless this is done, the attainment of self-sufficiency will be further postponed.

44. A survey of cattle kind conducted in 1954 revealed that there were approximately 3,000 head in the entire island. Statistics on small stock were not available. A committee was set up by Government during 1955 to enquire into the reason for the local shortage of animals, and to make recommendations for improving the situation.



45. A scheme for cattle agistment was prepared in a certain area to accommodate an estimated 200 head of cattle belonging to peasants in that area.

46. The usual precautionary immigration measures were observed to prevent the introduction of contagious animal diseases. Animal Import Regulations were adopted in 1954 (S.R. & O. No 34/54.)

47. The presence of a Veterinary Officer in the island has had its effect in stimulating a keener interest in livestock on the part of a few owners.

48. Arrangements are in force to prevent the unnecessary slaughter of cows and heifers through a system of permits.

49. *Cocoa Industry Improvement* : Along with those Colonial Development and Welfare Schemes for the Control of Crown Lands and the operation of five Agricultural Stations, the Scheme for the Improvement of the Cocoa Industry played a major part in the activities of the Department. The financial position of the Scheme was somewhat critical towards the end of the period, but a small supplementary Colonial Development and Welfare Grant was made available in 1954 to enable the establishment of certain essential capital works.

50. The general demand for rooted cocoa cuttings remained high and was intensified by a growing awareness of the superiority of this type of planting material to seedlings. The further expansion of banana cultivations accelerated the demand as bananas can be conveniently used as a nurse or shade crop for cocoa.

51. There was a marked increase in the number of cocoa cuttings successfully rooted during 1954—compared with the previous year; 34,000 compared with 24,000. Severe drought in 1955 however, caused a decline in output on account of adverse effects experienced both in propagators and in nurseries.

52. Nurseries for providing cuttings have now reached their sixth year and have been taxed to their utmost to cope with the increased demand for rooting flushes. Heavy and systematic prunings coupled with fertiliser applications had to be carefully carried out.

53. Gliricidia and Castor Oil were used with advantage as shade in the nursery. The use of bananas was discontinued.

54. In the propagating units, sawdust, coconut fibre and washed river silt were used with fair degrees of success.

55. Two new storage sheds for the final hardening of plants were erected to relieve congestion in the storage section. A protective masonry wall was erected to divert storm water from these sheds. The woodwork of bin covers was removed throughout.

56. Apart from the incidence of Phytophthora on potted cuttings in the sheds, and occasional attacks of thrips in the nurseries, no serious trouble was experienced from pests and diseases.

57. Two propagating units were erected on privately-owned estates during 1954 and an additional two in 1955. Constructional plans and technical advice were provided by the Department and their functioning to date has been satisfactory.

58. The following table shows the distribution of plants from the Central propagating Station during the period :—

|           |    | 1954   | 1955   |
|-----------|----|--------|--------|
| January   | .. | 659    | 300    |
| February  | .. | 450    | 450    |
| March     | .. | 850    | 437    |
| April     | .. | 820    | —      |
| May       | .. | 50     | 450    |
| June      | .. | 2,359  | 3,841  |
| July      | .. | 2,800  | 1,595  |
| August    | .. | 1,185  | 880    |
| September | .. | 3,350  | 826    |
| October   | .. | 2,850  | 1,430  |
| November  | .. | 4,900  | 3,045  |
| December  | .. | 2,279  | 2,114  |
|           |    | 22,552 | 15,368 |

59. Overall rooting efficiency ranged from 68% to 72% in rooting bins and 62% to 68% in hardening bins.

60. The following clones were propagated :—

I.C.S. 60,95, 40, 39, 48, 46, 1, 16, and 98.

D.S. 1, 9, 7, 6, and 3.

G.S. 29.



61. *Lime Station* : This station formerly styled "The Lime Experiment Station", is no longer operated as a local Citrus Research Centre but is run purely as a commercial unit as far as funds and other considerations can allow. The main lime and citrus crops planted on this site well over 20 years ago are obviously in need of replanting and rehabilitation.

62. The following was derived from the sale of produce at this Station.

|                   |    |             |
|-------------------|----|-------------|
| Produce sold 1954 | .. | \$ 2,039.00 |
| Produce sold 1955 | .. | \$ 1,355.00 |

Produce was comprised of the following :—

|               |    | 1954        | 1955         |
|---------------|----|-------------|--------------|
| Limes         | .. | 786 barrels | 442 barrels. |
| Grapefruit    | .. | 5,650 fruit | 1,200 fruit. |
| Coconuts      | .. | 500 "       | 2,875 "      |
| Avocado Pears | .. | 200 "       | 228 "        |
| Oranges       | .. | 1,700 "     | 1,200 "      |
| Mangoes       | .. | 6,325 "     | 2,485 "      |

63. *Agricultural Education* : The Agricultural Apprentice—ship Training Scheme operated by the department continued. Certain graduates of the Scheme found employment with estates, whilst others were taken on as Junior Field Officers.

64. Two members of Staff-in-Post were sent to the Eastern Caribbean Farm Institute to undergo the first one-year course offered by this Institution. Both students were successful, one having secured an Honours diploma. Two more students were sent in 1955 for the second one-year course.

65. *Investigational Work* : As stated earlier in this Report, work along these lines was somewhat restricted due to the shortage of Staff. Some useful indications, however, were obtained from simple manurial experiments laid down on a "Yellow Earth" volcanic soil type at one of the main Agricultural Stations. The experiments were aimed at assessing the responses to treatments of nitrogen, phosphate and potash in 3 x 3 Latin Squares with the following crops—maize and cassava.

66. The following results were obtained :—

#### MAIZE.

Treatment —Nitrogen 2 cwt. Sulphate of Ammonia per acre.  
Phosphate 2 cwt. Superphosphate per acre.  
Potash 1 cwt. Muriate of Potash per acre.

Average yield in lbs per acre (Grain-on-the-Cob).

N. 190 lbs/acre.

P. 1,535 lbs/acre.

K. 332.5 lb /acre.

Significant difference at 5% —702 lbs/acre.

(Note :—Response by stalks non-significant).

67. CASSAVA.

Treatment Nitrogen —Sulphate of Ammonia }  
Phosphate—Superphosphate } 644 lbs/acre.  
Potash —Mauriate of Potash }

Average yield in tons/acre (Foliage).

N 9.3 tons.

P 12.6 tons.

K 7.2 tons.

Significant Difference at 5% —2.6 tons/acres.

(Note :—Response by roots non-significant).

68. Trials were laid down to assess the difference in performance between certain cocoa clones.

69. *Agricultural Legislation* : The following legislation affecting agriculture was in force :—

Forest, Soil and Water Conservation Ordinance No. 14 of 1956.

Agricultural Small Tenancies Ordinance No. 9 of 1953.

Animals Disease Ordinance No. 15 of 1952.

Agricultural Advisory Committee Ordinance No. 6 of 1935.

Botanic Gardens Ordinance No. 19 of 1932.

Crown Lands Ordinance No. 1 of 1915.

Dominica Limes Association Ordinance No. 18 of 1940.

Exportation of Fruit Ordinance No 4 of 1929.

Preparation for Export of Citrus and other Fruit Ordinance No. 17 of 1951.

Agricultural Produce Export Ordinance No. 23 of 1941.

Plant Protection Ordinance No. 1 of 1941.

Animals Disease (Importation) Control Regulations S.R. & O. No. 34 of 1954 came into effect in February 1955. These Regulations are modelled on existing ones in force in other British West Indian territories and are aimed at uniformity of Legislation in the area. S.R. & O. No. 44 of 1954 was introduced in 1954 as an amendment to the Agricultural Small Tenancies Ordinance.

70. There were signs of unwarranted alarm arising out of the operation of the Agricultural Small Tenancies Ordinance on the part of landlords and tenants alike. Several cases referred to the department for arbitration were able to be determined on close examination without the need to resort to law.

71. *Staff Notes* : Mr. St. George Cooper, Agricultural Superintendent went on vacation leave in January, 1954 and assumed duties in Trinidad as Senior Agricultural Officer, Department of Agriculture from August of that year.

72. Mr. J. A. N. Burra, Assistant Conservator of Forests, left the Colony in August, 1954 on vacation prior to taking up an appointment in Cyprus. The post of Assistant Conservator of Forests was subsequently abolished.

73. Major C. N. Chappel took up appointment as Veterinary Officers in May 1955.

74. Mr. S. O. Pringle was seconded to the newly-created post of Crown Lands Officer.

75. Mr. C. O. Hill, Forest Supervisor returned from a two-year course in Forestry in Cyprus in 1954, and subsequently attended a six-month Tropical Forestry Course in Puerto Rico in 1955.

76. The post of Livestock Officer was abolished at the commencement of 1954. The substantive holder accordingly took up appointment in Jamaica with the department of Agriculture.

77. Mr. E. S. Lancaster was appointed to the post of Farm Manager, Central Livestock Farm, in April, 1954.

78. *Visitors* : Among visitors to the Department were His Excellency the Governor; His Honour the Administrator; Mr. L. L. DeVerteuil, Cocoa Agronomist, Trinidad; Mr. G. W. Gordon, Director of Surveyors and Sub-Intendant of Crown Lands, Trinidad; Dr. D. R. Melrose of Reading Cattle Research Centre; Mr. E. A. Tai, Citrus Agronomist, Department of Agriculture, Trinidad; Mr. H. H. Frazer, Conservator of Forests, Windward Islands.

79. *Miscellaneous* : The Agricultural Superintendent and the Cocoa Assistant attended the Cocoa Tour in Trinidad, arranged by the Caribbean Commission. The Acting Agricultural Superintendent and the Manager of the Marketing Depot were delegates at a Food Production and Marketing Conference held at Hastings House, Barbados, in April, 1955.

80. The Agricultural Superintendent served on the following Boards and Committees :—

- (i) The Dominica Limes Association (Chairman),
- (ii) The Dominica Banana Board of Management;
- (iii) The Agricultural Advisory Committee (Chairman),
- (iv) The Leaf Spot Board of Control (Chairman),
- (v) The Citrus Growers Association,
- (vi) The Livestock Shortage Committee,
- (vii) The Central Housing and Planning Authority,
- (viii) The Board of Education,
- (ix) The Agricultural Loans Board.

81. *Acknowledgements* : The writer would like to record the valuable assistance and co-operation rendered by the Staff of the Department, His Honour the Administrator, Heads of other Departments and the planting community. Special tribute is deserving to the Customs Officials for their prompt and ready co-operation in assisting with the enforcement of immigration regulations dealing with the prevention of plant and animal diseases.

H. A. L. FRANCIS.  
*Agricultural Superintendent.*

82. *Administration Report—Crown Lands* : The Scheme for the control of Crown Lands had as its continued objective the arrest and control of Shifting Cultivation practised by squatters on Crown Lands. For this purpose a sum of £49,000 was approved under a Colonial Development and Welfare Grant to cover the period 1st April, 1952 to 31st March, 1956.

83. The Chief Forest Officer who is also the Agricultural Superintendent maintained the Administrative control of all Crown Lands, while the Surveyor General maintained technical control over survey matters. Provision is made for one Crown Lands Officer, six Surveyors, fourteen Soil Conservation Instructors, one Draughtsman, one Clerical Assistant. The full complement of surveyors was always difficult to maintain. During the period an average of 4.5 surveyors were available. Soil Conservation Instructors were engaged in the inspection of land prior to disposal for



sale, the location of Crown Land Squatters and advising and assisting of farmers with proper cultural practices aimed at conserving the soil and its fertility. These officers work in liaison with Surveyors, Forest Officers and Agricultural Instructors. In January 1955 a Crown Lands Officer was appointed.

84. A review of the policy governing the sale of Crown Lands resulted in the survey of suitable areas aimed at the more orderly settlement of farmers in Block Settlements, instead of settlement on isolated patches of land. This has the effect of increasing the rate at which the lots of land can be surveyed, lessening the cost of surveys and will ultimately enable proper organisation of those farmers for the future community and agricultural development.

85. One small area of approximately 50 acres has already been surveyed, subdivided and allocated. Three other areas, involving survey of approximately 1,500 are in the process of being surveyed prior to subdivision and allocation.

86. A considerable amount of time and money has necessarily to be spent in demarking the boundaries of privately owned lands so that the Crown Lands may be clearly and accurately defined.

87. At the end of 1955 progress made with the sale of land was as follows :—

|                           |    |     |       |
|---------------------------|----|-----|-------|
| Application submitted     | .. | ..  | 2,149 |
| Sales approved            | .. | ... | 1,015 |
| Sales not approved        | .. | ..  | 175   |
| Surveys completed         | .. | ..  | 552   |
| Sales by Auction          | .. | ..  | 166   |
| Title Certificates Issued | .. | ..  | 25    |

S. O. PRINGLE,  
*Crown Lands Officer.*

88. *Administration Report—Forest Service* : No Forest Policy has yet been prepared for Dominica. Dr. Beard's proposals for a Forest Policy as outlined in Bulletin No. 11 of the Development and Welfare Organisation has been adopted in principle and is as follows :—

- (a) The execution, together with other Departments, of a Land Use Survey of Dominica to provide the necessary data for land planning.
- (b) On completion of (a) to draw up a complete land allocation and conservation policy of Dominica.
- (c) To carry out Forest Reservation and to manage these Reserves in such a manner as to fulfill their protective function in the interest of soil and water conservation, and at the same time to provide the maximum out-turn of forest produce on the basis of a sustained yield.
- (d) To carry out research in silviculture, and utilization of forest products.
- (e) To educate and train subordinate staff and the public to the benefit of a properly implemented Forest Policy and to the efficient use of Forest Products.
- (f) To encourage private forestry and to assist in establishing conservative management.
- (g) To protect nature.

89. *The Forest Estate* :—(1) *Crown Lands*. Sales of Timber and other forest produce on Crown Lands continued during the last two years. Squatting on Crown Lands has been stopped almost completely. Work on Demarcation of Forest Reserves started in October 1954, and continues to progress. Enumeration Surveys were made in the Gleau Gommier forest along the Trans-insular road in 1955. Reconnaissance work, in connection with silvicultural operations in virgin and secondary forest, was carried out in 1954—1955.

(2) *Private Lands* : Most owners of privately owned forest continue to cut trees indiscriminately with no consideration for future yield. Girth limits are seldom used on private lands, and trees of all sizes are utilized. A few large estate owners have started tree planting in a small way. Some Red Cedar and Mahogany have been tried in different parts of the Island.

90. *Communications* : The construction of the Trans-insular road now progressing through the Gleau Gommier forest, opens up a fairly large area of virgin forest for utilization. The Rosalie road when constructed will also open up large areas of forest. The construction of these two roads will help tremendously in the protection of Forest Reserves, and in the utilization of timber.

91. *Education* : A programme of lectures on Forestry to children in schools in different parts of the island was carried out by the Forest Supervisor in 1955. The Field Staff continued routine education within their range or Beat, and good public relations are maintained.

92. *Staff* : Forest Service field staff strength in 1954—1955 was one Forest Supervisor, four Rangers, and nine guards. One Ranger acted for the Forest Supervisor until his return from Cyprus in October 1954. One guard resigned at the end of 1955, Office Staff strength remained unchanged throughout the two years.

93. *Forest Reservations* : The Roseau River Catchment Reserve, completed in 1950, has not been declared, as plans for same are not yet complete. Demarcation work on the Morne Diablotin, Morne Trois Piton and Morne Governor Reserves was started in October 1954 and carried on in 1955. On the Morne Diablotin (Central Reserve) the line has been cleared from Morne Jean Charles (above the Carib Reserve) through the Carib Trace and Crapaud Ajoupa to Montana ridge above Point Round, and from Morne LaResource to the heights of Coulibistrie. On the Morne Trois Pitons Reserve lines are complete from the boundary of the Middleham Estate on the Trans-insular road to Deux de l'eau above the Rosalie Estate. Work on the Morne Governor Reserve progresses at a much slower pace, due to tremendous gorges and precipitous slopes in the LaPlaine-Laronde-Boetica region. Reconnaissance for the Morne Laurent Reserve started at the end of 1955.

94. *Forest Protection* : Patrols and Inspections for control and protection of Water Catchment Areas, Forest Produce etc., were carried out during the last two years. There have been some offences for clearing land for making gardens, and some for sawing without a licence, but the number of offences committed on Crown Lands is on the decrease.

95. *Forest Offences 1954* :—

| Cases taken against<br>Individuals.  | No. of Cases. | Total Compensation. |
|--------------------------------------|---------------|---------------------|
| Court Cases—Finis ..                 | 5             | \$ 49.00            |
| Cases Compunded ..                   | 12            | 33.42               |
| Court Cases—Warned<br>and Discharged | 3             | —                   |
| Warned by C. F. O. ..                | 30            | —                   |
| Outstanding 31.12.54 ..              | 15            | —                   |
|                                      | 65            | 82.42               |

*Forest Offences 1955* :—

| Cases taken against<br>Individuals. | No. of Cases. | Total Compensation. |
|-------------------------------------|---------------|---------------------|
| Cases Compunded ..                  | 5             | \$ 61.24            |
| Warned by C. F. O. ..               | 10            | —                   |
| Outstanding ..                      | 2             | —                   |
|                                     | 17            | \$ 61.24            |

96. *Utilization—Crown Lands Produce* :—

|         | Sawn Cu. ft. | Hewn Cu. ft. | Roundwood<br>Cu. ft. | Shingles 100s |
|---------|--------------|--------------|----------------------|---------------|
| 1954 .. | 10,000       | 205          | 17                   | 45            |
| 1955 .. | 10,991       | 142          | —                    | 59            |

97. *Revenue* :—

Forest Service Receipts 1954 (Treasury figures) \$1,576.00

Forest Service Receipts 1955 (Forest Service Figures) \$2,163.00.

98. *General* : The Forest Supervisor returned from Cyprus in September 1954, after a two year Course in Forestry. In 1955, the Forest Supervisor attended a two months course in Tropical Forestry in Puerto Rico.

99. Periodical visits were paid to this Island by the Conservator of Forests in 1954. In 1955 he visited Dominica in February and June, and was on leave in the latter part of the year.

C. O. HILL,  
Forest Supervisor.



## APPENDIX I.

## Principal Exports for the Years 1954 and 1955.

| Commodity<br>Destination           | Quantity    |           |           | Value \$ F.O.B. |           |
|------------------------------------|-------------|-----------|-----------|-----------------|-----------|
|                                    | Unit        | 1954      | 1955      | 1954            | 1955      |
| <b>Fresh Fruit :—</b>              |             |           |           |                 |           |
| <i>Bananas :</i>                   |             |           |           |                 |           |
| United Kingdom ..                  | Stem ..     | 1,357,725 | 1,330,615 | 2,481,763       | 2,299,104 |
| British Caribbean ..               | " ..        | 2,280     | 4,121     | 2,765           | 9,216     |
| Other Countries ..                 | " ..        | 338       | —         | 402             | —         |
| Total ..                           | " ..        | 1,360,343 | 1,334,736 | 2,484,931       | 2,308,320 |
| <i>Grapefruit :</i>                |             |           |           |                 |           |
| United Kingdom ..                  | C/crate ..  | 31,544    | 19,938    | 145,040         | 92,963    |
| Bermuda ..                         | " ..        | 208       | 217       | 1,226           | 1,509     |
| British Caribbean ..               | " ..        | 5,811     | 4,038     | 19,762          | 14,162    |
| Other Countries ..                 | " ..        | 102       | 41        | 519             | 168       |
| Total ..                           | C/Crates    | 37,665    | 24,234    | 166,546         | 108,802   |
| <i>Oranges :</i>                   |             |           |           |                 |           |
| United Kingdom ..                  | C/crates .. | 4,678     | 10,098    | 24,472          | 50,484    |
| Bermuda ..                         | " ..        | 869       | 1,255     | 5,429           | 5,716     |
| British Caribbean ..               | " ..        | 3,664     | 4,766     | 14,808          | 21,364    |
| Other Countries ..                 | " ..        | 560       | 350       | 3,528           | 1,447     |
| Total ..                           | C/crates    | 9,771     | 16,470    | 48,236          | 79,011    |
| <i>Mangoes :</i>                   |             |           |           |                 |           |
| United Kingdom ..                  | C/crates .. | 77        | —         | 401             | —         |
| Bermuda ..                         | " ..        | 1,364     | 2,621     | 8,879           | 19,143    |
| British Caribbean ..               | " ..        | 6,266     | 4,396     | 35,253          | 18,468    |
| Other Countries ..                 | " ..        | 342       | 15        | 1,370           | 90        |
| Total ..                           | C/crates    | 8,048     | 7,032     | 45,903          | 37,701    |
| <b>Preserved Fruits :—</b>         |             |           |           |                 |           |
| <i>Lime Juice : Settled</i>        |             |           |           |                 |           |
| United Kingdom ..                  | Gals. ..    | 233,430   | 490,086   | 236,499         | 365,476   |
| Australia and New Zealand ..       | " ..        | 29,967    | 25,111    | 29,337          | 23,468    |
| Bermuda ..                         | " ..        | 85        | 87        | 86              | 76        |
| British African Territories ..     | " ..        | 8,288     | 13,473    | 8,470           | 11,578    |
| British Caribbean ..               | " ..        | 2,353     | 2,996     | 2,061           | 2,693     |
| Canada ..                          | " ..        | 8,411     | 16,072    | 9,280           | 15,199    |
| U. S. America ..                   | " ..        | 8,194     | 15,382    | 7,689           | 13,544    |
| Total ..                           | Gals.       | 290,726   | 563,207   | 293,421         | 432,035   |
| <i>Lime Juice : Top Pulp</i>       |             |           |           |                 |           |
| United Kingdom ..                  | Gals. ..    | 28,897    | 75,406    | 38,722          | 75,406    |
| Canada ..                          | " ..        | 11,077    | 5,846     | 12,891          | 6,270     |
| New Zealand ..                     | " ..        | —         | 609       | —               | 748       |
| U.S. America ..                    | " ..        | 207       | 208       | 214             | 217       |
| Total ..                           | Gals.       | 40,181    | 82,069    | 51,827          | 82,642    |
| <i>Pomace of Dried Lime Skin :</i> |             |           |           |                 |           |
| United Kingdom ..                  | Long Ton.   | 113       | 134       | 59,766          | 70,512    |
| Total ..                           | Long Ton    | 113       | 134       | 59,766          | 70,512    |

| Commodity<br>Destination                                                                                                       | Quality  |         |         | Value \$ F.O.B. |         |
|--------------------------------------------------------------------------------------------------------------------------------|----------|---------|---------|-----------------|---------|
|                                                                                                                                | Unit     | 1954    | 1955    | 1954            | 1955    |
| <b>Cocoa :—</b>                                                                                                                |          |         |         |                 |         |
| <i>Cocoa Beans :</i>                                                                                                           |          |         |         |                 |         |
| U.S. America ..                                                                                                                | lb. ..   | 208,100 | 363,200 | 145,164         | 253,262 |
| Holland ..                                                                                                                     | .. ..    | 52,400  | 41,600  | 28,406          | 31,352  |
| Canada ..                                                                                                                      | .. ..    | 33,400  | 9,000   | 25,770          | 6,789   |
| United Kingdom ..                                                                                                              | .. ..    | —       | 6,400   | —               | 5,023   |
| West Germany ..                                                                                                                | .. ..    | 29,400  | —       | 17,056          | —       |
| British Caribbean ..                                                                                                           | .. ..    | —       | 225     | —               | 173     |
| Total ..                                                                                                                       | lb. ..   | 323,300 | 420,425 | 216,396         | 296,599 |
| <i>Copra :</i>                                                                                                                 |          |         |         |                 |         |
| Barbados ..                                                                                                                    | Long Ton | 919     | 1,021   | 275,720         | 306,253 |
| Total ..                                                                                                                       | Long Ton | 919     | 1,021   | 275,720         | 306,253 |
| <i>Bulbs, tubes, rhizomes<br/>of flowers or of foliage,<br/>plants, cuttings, slips,<br/>live trees and other<br/>plants :</i> |          |         |         |                 |         |
| Bermuda ..                                                                                                                     | .. ..    | ..      | ..      | 30              | —       |
| British Caribbean ..                                                                                                           | .. ..    | ..      | ..      | 56,900          | 38,147  |
| Total ..                                                                                                                       | .. ..    | ..      | ..      | 56,932          | 38,147  |
| <b>Oils Essential :—</b>                                                                                                       |          |         |         |                 |         |
| <i>Bay Oil :</i>                                                                                                               |          |         |         |                 |         |
| United Kingdom ..                                                                                                              | lb. ..   | 17,140  | 15,516  | 31,763          | 50,704  |
| U.S. America ..                                                                                                                | .. ..    | 16,101  | 19,641  | 30,543          | 46,530  |
| Union of South<br>Africa ..                                                                                                    | .. ..    | 2,664   | —       | 4,465           | —       |
| Continent of Europe ..                                                                                                         | .. ..    | 2,824   | 1,548   | 6,118           | 4,341   |
| British Caribbean ..                                                                                                           | .. ..    | 383     | 1,293   | 732             | 3,834   |
| Other Countries ..                                                                                                             | .. ..    | 744     | 350     | 1,260           | 3,010   |
| Total ..                                                                                                                       | lb. ..   | 39,856  | 38,347  | 74,882          | 108,420 |
| <i>Distilled Lime Oil :</i>                                                                                                    |          |         |         |                 |         |
| United Kingdom ..                                                                                                              | lb. ..   | 23,953  | 29,152  | 223,761         | 214,314 |
| Australia ..                                                                                                                   | .. ..    | 10,683  | 9,837   | 100,240         | 84,319  |
| Canada ..                                                                                                                      | .. ..    | 210     | 1,120   | 1,924           | 8,922   |
| British Caribbean ..                                                                                                           | .. ..    | 10      | 40      | 94              | 350     |
| West Germany ..                                                                                                                | .. ..    | 50      | —       | 489             | —       |
| Total ..                                                                                                                       | lb. ..   | 34,906  | 40,150  | 326,518         | 307,906 |
| <i>Spices :—Vanilla :</i>                                                                                                      |          |         |         |                 |         |
| U.S. America ..                                                                                                                | lb. ..   | 17,616  | 9,278   | 193,560         | 116,205 |
| Canada ..                                                                                                                      | .. ..    | —       | 300     | —               | 4,623   |
| British Caribbean ..                                                                                                           | .. ..    | 391     | 345     | 5,661           | 4,389   |
| Total ..                                                                                                                       | .. ..    | 18,006  | 9,924   | 199,221         | 125,217 |



## APPENDIX II

| 1954<br>Month | Rel. Hum.<br>Mean | Max.<br>Temp.<br>Mean. | Min.<br>Mean. | Barometric<br>Pressure<br>Mean. | 1955<br>Month. | Rel. Hum.<br>Mean | Max.<br>Temp.<br>Mean | Min.<br>Mean | Barometric<br>Pressure<br>Mean |
|---------------|-------------------|------------------------|---------------|---------------------------------|----------------|-------------------|-----------------------|--------------|--------------------------------|
|               | a.m.              | a.m.                   | a.m.          | a.m.                            |                | a.m.              | a.m.                  | a.m.         | a.m.                           |
|               | p.m.              |                        |               | p.m.                            |                | p.m.              |                       |              | p.m.                           |
| January       | 75                | 90                     | 66            | 30.00                           | January        | 70                | 84                    | 68           | 29.99                          |
| February      | 74                | 84                     | 66            | 29.99                           | February       | 69                | 85                    | 73           | 29.99                          |
| March         | 67                | 86                     | 67            | 30.00                           | March          | 61                | 87                    | 74           | 30.03                          |
| April         | 68                | 88                     | 68            | 29.99                           | April          | 59                | 91                    | 76           | 29.94                          |
| May           | 69                | 91                     | 70            | 30.07                           | May            | 65                | 95                    | 79           | 29.98                          |
| June          | 68                | 91                     | 70            | 30.00                           | June           | 67                | 89                    | 74           | 30.09                          |
| July          | 77                | 91                     | 70            | 29.98                           | July           | 68                | 89                    | 74           | 29.98                          |
| August        | 81                | 93                     | 69            | 29.98                           | August         | 73                | 91                    | 74           | 30.03                          |
| September     | 81                | 89                     | 71            | 29.96                           | September      | 70                | 88                    | 73           | 29.96                          |
| October       | 76                | 86                     | 70            | 29.95                           | October        | 73                | 90                    | 74           | 29.93                          |
| November      | 76                | 86                     | 69            | 29.96                           | November       | 73                | 88                    | 72           | 29.95                          |
| December      | 73                | 81                     | 66            | 29.94                           | December       | 79                | 86                    | 70           | 30.01                          |
| Yearly Mean   | 74                | 88                     | 69            | 29.99                           | Yearly Mean    | 69                | 97                    | 82           | 29.99                          |
|               |                   |                        |               | 29.94                           |                |                   |                       |              | 29.93                          |

The lowest reading of the Barometer for 1954 was on October 9th 29.78.

The lowest reading of the Barometer for 1955 was on October 29th 29.79.

|                              | Month. | Date.           |
|------------------------------|--------|-----------------|
| Highest Barometer Reading    | 30.07  | Jan. 19th. 1954 |
| Lowest Barometer Reading     | 29.83  | Nov. 17th. "    |
| Highest Max. Temperature...  | 95°    | Aug. 1st. "     |
| Lowest Min. Temperature      | 63°    | Feb. 1st. "     |
| Greatest Rainfall in 24 hrs. | 4.02   | Sept. 25th. "   |

APPENDIX III.  
Rainfall at the Botanic Gardens, Dominica, 1931—1955.

|       | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8      | 9     | 10    | 11    | 12     | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    |       |
|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|       | 1931  | 1932  | 1933  | 1934  | 1935  | 1936  | 1937  | 1938   | 1939  | 1940  | 1941  | 1942   | 1943  | 1944  | 1945  | 1946  | 1947  | 1948  | 1949  | 1950  | 1951  | 1952  | 1953  | 1954  | 1955  | Mean. |
| Jan.  | 1.47  | 5.47  | 7.20  | 4.81  | 2.37  | 3.46  | 3.24  | 6.73   | 4.13  | 1.67  | 5.00  | 4.16   | 5.70  | 4.24  | 1.76  | 6.12  | 9.23  | 5.95  | 2.06  | 9.87  | 5.96  | 1.85  | 3.94  | 5.36  | 1.84  | 4.94  |
| Feb.  | 1.05  | 1.57  | 2.31  | 1.70  | 1.59  | 2.50  | 3.40  | 1.43   | 2.84  | 1.45  | .47   | 2.25   | 1.01  | 6.89  | 9.14  | 5.86  | 2.07  | 4.54  | 6.44  | 3.59  | 2.92  | 1.59  | 4.89  | 2.57  | 1.13  | 2.99  |
| Mar.  | .59   | 1.56  | 2.37  | 3.36  | 6.90  | .82   | 1.34  | 2.69   | 4.38  | 2.16  | 2.05  | .97    | 5.46  | 1.89  | 1.29  | 1.47  | 2.75  | 1.48  | 2.73  | 3.75  | 1.88  | 1.38  | 4.11  | 3.04  | 1.86  | 2.49  |
| April | .51   | 2.33  | 2.03  | 2.91  | 1.45  | 3.94  | 2.61  | .72    | 5.62  | 1.00  | 2.82  | 7.14   | 3.34  | 1.65  | 1.11  | 2.88  | 2.61  | 2.11  | 1.46  | 1.89  | 3.84  | 4.25  | 4.55  | 4.49  | .87   | 2.49  |
| May   | 1.70  | 5.07  | 2.26  | 3.82  | 4.27  | 2.34  | 1.48  | 1.41   | .86   | 1.34  | 5.53  | 4.86   | 3.20  | 8.55  | 1.95  | 3.18  | 5.53  | 4.60  | 2.58  | 10.37 | 13.20 | 4.31  | 7.29  | 2.64  | 3.19  | 4.17  |
| June  | 9.98  | 10.72 | 7.05  | 2.59  | 5.04  | 6.47  | 6.57  | 19.56  | 4.90  | 4.65  | 5.39  | 9.18   | 6.25  | 7.20  | 6.21  | 7.04  | 4.67  | 6.12  | 13.02 | 12.64 | 10.54 | 9.66  | 6.83  | 7.54  | 6.80  | 7.87  |
| July  | 18.45 | 8.05  | 12.30 | 9.54  | 13.47 | 18.48 | 5.60  | 13.44  | 7.18  | 7.97  | 13.94 | 13.86  | 6.10  | 12.98 | 11.17 | 6.15  | 11.73 | 12.84 | 11.41 | 10.00 | 8.32  | 13.19 | 16.32 | 11.97 | 7.56  | 11.28 |
| Aug.  | 17.44 | 7.23  | 7.94  | 7.61  | 8.87  | 10.36 | 6.20  | 27.92  | 6.96  | 6.96  | 7.52  | 11.13  | 10.93 | 9.19  | 9.05  | 9.44  | 5.73  | 8.41  | 9.69  | 8.18  | 10.36 | 9.83  | 8.89  | 11.55 | 7.94  | 9.82  |
| Sept. | 13.51 | 6.13  | 11.51 | 4.08  | 12.93 | 11.14 | 4.40  | 10.77  | 6.52  | 2.55  | 10.62 | 11.76  | 7.99  | 5.74  | 15.43 | 8.34  | 8.09  | 8.67  | 12.75 | 4.90  | 9.69  | 6.25  | 14.35 | 18.08 | 5.95  | 9.69  |
| Oct.  | 9.71  | 6.72  | 9.26  | 3.89  | 5.43  | 7.65  | 3.74  | 4.48   | 15.42 | 9.00  | 6.98  | 5.91   | 9.69  | 6.39  | 10.90 | 4.40  | 4.02  | 8.40  | 9.32  | 14.14 | 4.80  | 8.04  | 4.95  | 8.15  | 5.43  | 7.47  |
| Nov.  | 11.90 | 13.83 | 11.04 | 5.58  | 3.39  | 12.14 | 20.85 | 12.34  | 5.91  | 10.97 | 12.45 | 24.82  | 5.38  | 9.59  | 2.98  | 13.91 | 7.10  | 9.37  | 2.68  | 8.00  | 7.82  | 9.10  | 6.20  | 8.34  | 9.52  | 9.81  |
| Dec.  | 7.56  | 5.21  | 7.03  | 9.46  | 6.24  | 10.84 | 5.43  | 6.14   | 3.57  | 9.96  | 4.81  | 8.47   | 9.60  | 6.81  | 4.33  | 4.34  | 8.67  | 6.97  | 5.81  | 3.62  | 6.74  | 1.91  | 7.43  | 2.38  | 2.16  | 6.22  |
| Total | 93.87 | 73.89 | 82.22 | 59.35 | 71.95 | 89.26 | 74.86 | 104.63 | 68.29 | 59.68 | 77.58 | 104.51 | 71.65 | 81.12 | 75.32 | 73.07 | 72.20 | 79.46 | 79.95 | 93.95 | 86.07 | 81.36 | 89.75 | 86.11 | 54.25 | —     |

Average Annual Rainfall 1931—1955—79.25 inches.



## RAINFALL RETURNS—DOMINICA.

| Stations               | Total No. of Inches. |        |
|------------------------|----------------------|--------|
|                        | 1954                 | 1955   |
| Botanic Gardens ..     | 86.11                | 54.25  |
| Experiment Station ..  | 117.45               | 68.65  |
| Bath Estate ..         | 85.91                | 60.17  |
| Colihaut Station ..    | 52.93                | 55.43  |
| Stock Farm ..          | 86.19                | 59.79  |
| Portsmouth Station ..  | 107.12               | —      |
| Soufriere Estate ..    | 102.95               | 65.39  |
| Cane field ..          | 79.44                | —      |
| Cocoa Station ..       | 108.13               | 78.60  |
| Castleton ..           | —                    | —      |
| Riversdale ..          | —                    | —      |
| Grand Bay Station ..   | 123.09               | 73.97  |
| Delicies ..            | 141.53               | 108.19 |
| LaPlaine Station ..    | 156.25               | 122.54 |
| Londonderry Station .. | 104.61               | 104.11 |
| Pte. Mulatre ..        | 125.74               | 104.80 |
| Bagatelle ..           | —                    | 110.89 |







